CHEMICAL HAZARDS PROGRAM
Environmental Health Branch
Georgia Department of Community Health
Atlanta, GA

Technical Assistance

Gwinnett County

Naphthalene Pest Control
June 10, 2010

On May 17, 2010 a resident contacted the Chemical Hazards Program (CHP) about their neighbors' inappropriate use of mothballs as a pest repellent in their yard. She described her neighbors as using one mothball every two inches on their lawn. She was concerned about health effects from exposure to naphthalene in air, about whether naphthalene can get into the soil or water and move onto her property, and the potential for health effects from ingestion of soil by her dog. The resident stated that the odor gives her headaches and dizziness, and that she cannot go outdoors without feeling ill. She also mentioned that her dog loves running around outside, but that he is not behaving normally, is fatigued, and is sleeping a lot more than normal. To address her concerns, I conducted a review of regulatory and public health information about naphthalene. In an email response to her concerns that contained the following information, I included the Chemical Hazards Program brochure *Health Effects of Odors.*

Naphthalene is a solid that evaporates easily. Naphthalene partially dissolves in water, and can become weakly attached to soil. In air, the moisture and sunlight break it down within one day. In water and soil, it evaporates into the air and/or bacteria break it down into carbon dioxide and water. Naphthalene does not accumulate in the flesh of animals or fish that may be consumed.

Naphthalene is regulated by the U.S. Environmental Protection Agency (EPA) by the Pesticides Program under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). FIFRA provides for federal regulation of pesticide distribution, sale, and use. Under FIFRA, pesticides and repellent chemicals must be used according to the instructions given on the product's label. More information regarding the safe use of pesticides can be found online at the National Pesticide Information Center at (http://npic.orst.edu), and at the U.S. Environmental Protection Agency website at (www.epa.gov/pesticides/controlling/index.htm) and (www.epa.gov/pesticides/health/safely.htm).

To answer her questions about what happens when a person (or animal) is exposed to naphthalene in air: once naphthalene enters a person's body, small amounts will dissolve in the blood, be processed by the liver and other organs, and then pass out of the body, mainly through urine. Most naphthalene that enters an individual's body is expected to leave the body quickly, within one to three days.

To answer the question about her dog licking soil from the yard off his feet, I told her that there is a potential that he might eat a small amount of naphthalene; however this is unlikely because naphthalene only binds to soil weakly, and it breaks down within one day. If her dog is showing symptoms and she is concerned about potential exposures to naphthalene, I recommended that she contact her veterinarian.

We discussed approaching her neighbors with information fact sheets, providing education about using mothballs in appropriate quantities placed in strategic areas around the home, and alternatives to naphthalene-containing products.

On May 22nd, she contacted the Georgia Environmental Protection Division, and the Department of Agriculture (GDA), Pesticide Division. On May 24th, she reported that her neighbors' replenished the naphthalene products on their lawn with the "Snake-A-Way" product. On May 25th, GDA responded to her call, and a compliance officer came to her home to verify her concerns and to provide assistance. The GDA compliance officer verified her neighbor's use of naphthalene in their yard, and spoke to the neighbors about proper use of pesticides and pest repellent products.

If she has concerns about exposure to poisons (including hazardous chemicals), she can contact the Georgia Poison Center or go to www.georgiapoisoncenter.org.